

## Small Form Factor RFID Applicator, Phase I

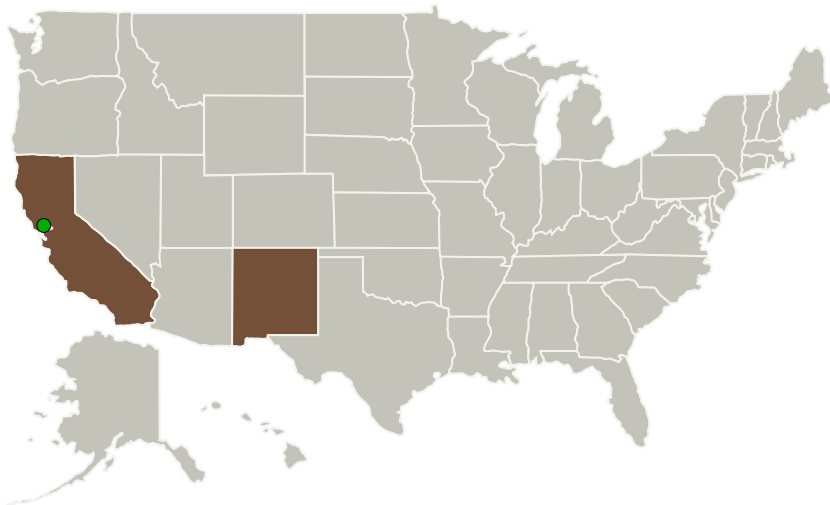
Completed Technology Project (2017 - 2017)



## Project Introduction

The proposed development of a small form factor Astrobees dedicated RFID label applicator will allow current and future free flying vehicles to place RFID labels assisting in logistics and asset tracking. Metis Technology Solutions proposes the development of an RFID label applicator designed to fulfill the Astrobees operational requirements, payload interface requirements, as well as satisfy JSC PSRP requirements for safety. The unit is designed to have a replaceable cartridge with 100 Alien Technologies ALN-9640 Higgs-3 RFID labels. Operationally the unit is first installed, Astrobees then propels and aligns the vehicle to the target asset/surface to be labeled once there a pitch maneuver aligns the label applicator with the assistance of integrated cameras. The unit then exerts a thrust force on the target as the applicator quickly applies the adhesive backed RFID label. A proof of concept early prototype shall be developed as a Phase I deliverable in conjunction with the findings report. The prototype is to demonstrate the extraction of the RFID label from the adhesive release liner, and transfer to a target surface with sufficient force to apply the label but minimize transient inputs to the Astrobees flight controller.

## Primary U.S. Work Locations and Key Partners



Small Form Factor RFID Applicator, Phase I Briefing Chart Image

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Organizations Performing Work	Role	Type	Location
Metis Technology Solutions, Inc.	Lead Organization	Industry Women-Owned Small Business (WOSB)	Albuquerque, New Mexico
● Ames Research Center(ARC)	Supporting Organization	NASA Center	Moffett Field, California

## Primary U.S. Work Locations

California	New Mexico
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## Images



## Briefing Chart Image

Small Form Factor RFID Applicator, Phase I Briefing Chart Image  
(<https://techport.nasa.gov/image/135483>)

## Organizational Responsibility

## Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

## Lead Organization:

Metis Technology Solutions, Inc.

## Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

## Project Management

## Program Director:

Jason L Kessler

## Program Manager:

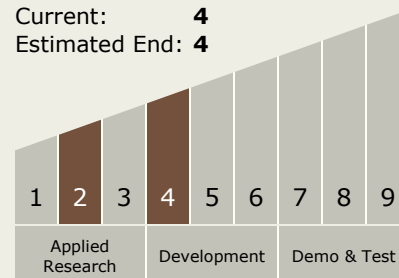
Carlos Torrez

## Principal Investigator:

Jose Cortez

## Technology Maturity (TRL)

Start: 2  
Current: 4  
Estimated End: 4



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### Technology Areas

#### Primary:

- TX04 Robotic Systems
  - └ TX04.3 Manipulation
    - └ TX04.3.2 Grappling Technologies

### Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System